

Fire classification of construction products and building elements - Part 6: Classification using data from reaction to fire tests on electric cables

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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ICS 13.220.50; 29.060.20

English Version

**Fire classification of construction products and building elements
- Part 6: Classification using data from reaction to fire tests on
electric cables**

Classement au feu des produits et éléments de construction
- Partie 6: Classement à partir des données d'essais de
réaction au feu sur câbles électriques

Klassifizierung von Bauprodukten und Bauarten zu ihrem
Brandverhalten - Teil 6: Klassifizierung mit den Ergebnissen
aus den Prüfungen zum Brandverhalten von elektrischen
Kabeln

This European Standard was approved by CEN on 20 December 2013.

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Contents

Page

Foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms, definitions and symbols.....	6
3.1 Terms and definitions	6
3.2 Symbols and abbreviations	9
4 Classes of reaction to fire performance	9
5 Test methods.....	10
5.1 General.....	10
5.2 Heat of combustion test (EN ISO 1716)	10
5.3 Vertical flame spread of single cable (EN 60332-1-2).....	10
5.4 Burning behaviour and smoke production of bunched cable – (EN 50399).....	10
5.5 Smoke production of burning cable (EN 61034-2)	10
5.6 Acidity of gases produced by burning cables (EN 50267-2-3).....	10
6 Principles for specimen preparation	10
7 Number of tests for classification	11
7.1 Minimum number of tests	11
7.2 Additional tests	11
7.3 Criteria for classification.....	11
7.4 Continuous parameters	11
7.5 Discontinuous parameters	11
8 Testing of electric cables (see Table 1).....	12
8.1 Class E _{ca}	12
8.2 Classes D _{ca} , C _{ca} , B2 _{ca}	12
8.3 Class B1 _{ca}	12
8.4 Class A _{ca}	12
8.5 Additional classifications s1, s2, s3 for smoke production	12
8.6 Additional classifications s1a, s1b for smoke production	12
8.7 Additional classifications d0, d1, d2 for flaming droplets/particles	12
8.8 Additional classifications a1, a2, a3 for acidity	12
9 Classification criteria for electric cables (see Table 1).....	13
9.1 General.....	13
9.2 Class F _{ca}	13
9.3 Class E _{ca}	13
9.4 Class D _{ca}	13
9.5 Class C _{ca}	14
9.6 Class B2 _{ca}	14
9.7 Class B1 _{ca}	14
9.8 Class A _{ca}	15
9.9 Additional classifications s1, s1a, s1b, s2, s3 for smoke production	15
9.9.1 General.....	15
9.9.2 Additional classification s1	15
9.9.3 Additional classification s1a	15
9.9.4 Additional classification s1b	15

9.9.5	Additional classification s2	15
9.9.6	Additional classification s3	15
9.10	Additional classifications d0, d1, d2 for flaming droplets and/or particles	16
9.11	Additional classifications a1, a2, a3 for acidity.....	16
10	Presentation of classification	16
11	Field of application of the classification	18
12	Classification report.....	19
12.1	General	19
12.2	Content and format	19
Annex A	(normative) Reaction to fire classification report for electric cables	22
A.1	Introduction.....	22
A.2	Details of classified product.....	22
A.2.1	General	22
A.2.2	Product description.....	23
A.3	Reports and results in support of this classification	23
A.3.1	Reports	23
A.3.2	Results.....	23
A.4	Classification and field of application.....	24
A.4.1	Reference of classification	24
A.4.2	Classification	24
A.4.3	Field of application.....	24
A.5	Limitations	24
Annex B	(informative) Background information as regards the reaction to fire performance of cables.....	26
B.1	General	26
B.2	Assumptions.....	26
B.3	Reference scenario and fire situations for cables	26
	Bibliography.....	29

Foreword

This document (EN 13501-6:2014) has been prepared by Technical Committee CEN/TC 127 "Fire safety in buildings", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2014, and conflicting national standards shall be withdrawn at the latest by September 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of (EU) N°305/2011.

CEN, CENELEC and EOTA committees preparing technical specifications, which contain performance requirements against reaction to fire tests, should make reference to the reaction to fire classification given in this European Standard and not refer directly to any specific fire test method.

This document has been prepared in cooperation with CLC/TC 20 "Electric cables", CLC/TC 46X "Communication cables" and CLC/TC 86A "Optical fibre cables".

EN 13501 *Fire classification of construction products and building elements* consists of the following parts:

- *Part 1: Classification using data from reaction to fire tests;*
- *Part 2: Classification using data from fire resistance tests, excluding ventilation services;*
- *Part 3: Classification using data from fire resistance tests on products and elements used in building service installations: fire resisting ducts and fire dampers;*
- *Part 4: Classification using data from fire resistance tests on components of smoke control systems;*
- *Part 5: Classification using data from external fire exposure to roofs tests;*
- *Part 6: Classification using data from reaction to fire tests on electric cables.*

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The aim of this European Standard is to define a harmonized procedure for the classification of reaction to fire of electric cables. This classification is based on the test procedures listed in Clause 5.

This European Standard has been prepared in support of the second essential requirement in the EC Construction Products Regulation (EU) N°305/2011 and as detailed in the Interpretative Document Number 2: Safety in case of fire (OJ C62 Vol. 37).

Background information on the Commission Decision regarding the classification of the reaction to fire performance of electric cables is given in Annex B.

There is a procedure by which certain products can be assigned a particular fire classification without the need for testing. Such products have well established reaction to fire performance and have been agreed by the Standing Committee on Construction. Agreements relating to such products which may be 'classified without further testing' (CWFT) are published in the Official Journal of the EC and are listed on the Nando-CPD database on the EC website (<http://europa.eu.int/comm/enterprise/construction>).

Part 1 of this European Standard covers classification resulting from reaction to fire tests for products other than electric cables.

Parts 2, 3 and 4 of this European Standard are concerned with classification resulting from fire resistance tests.

Part 5 covers classification resulting from tests for external fire exposure to roofs.

1 Scope

This European Standard provides the reaction to fire classification procedure for electric cables.

NOTE For the purpose of this European Standard the term “electric cables” covers all power, control and communication cables, including optical fibre cables.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50267-2-3, *Common test methods for cables under fire conditions — Tests on gases evolved during combustion of material from cables — Part 2-3: Procedures - Determination of degree of acidity of gases for cables by determination of the weighted average of pH and conductivity*

EN 50399, *Common test methods for cables under fire conditions — Heat release and smoke production measurement on cables during flame spread test — Test apparatus, procedures, results*

prEN 50575, *Power, control and communication cables — Cables for general applications in construction works subject to reaction to fire requirements*

CLC/FprTS 50576, *Electric cables, extended application of test results*

EN 60332-1-2:2004, *Tests on electric and optical fibre cables under fire conditions — Part 1-2: Test for vertical flame propagation for a single insulated wire or cable — Procedure for 1 kW pre-mixed flame (IEC 60332-1-2:2004)*

EN 61034-2, *Measurement of smoke density of cables burning under defined conditions — Part 2: Test procedure and requirements (IEC 61034-2)*

EN ISO 1716, *Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value) (ISO 1716)*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

NOTE Where the definitions are identical to those in EN ISO 13943, this is indicated.

3.1.1

product

material, element or component about which information is required, in the context of this standard, the product is an electric cable about which information is required

3.1.2

material

single basic substance or uniformly dispersed mixture of substances